



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,346	06/19/2001	Wen-Yi Kuo	105494	9643

7590 09/23/2005

MR. JAMES A. OLIFF
OLIFF & BERRIDGE
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

LEVITAN, DMITRY

ART UNIT PAPER NUMBER

2662

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,346

Applicant(s)

KUO, WEN-YI

Examiner

Dmitry Levitan

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Signals shown on Fig. 2 and disclosed on page 7, lines 13-17 do not match, for example signal 216 of the disclosure is missing on Fig. 2.

2. The drawings are objected to because step 615 “Receive TCP Segments” on Fig. 7 does not correspond with the description in the disclosure on page 13, lines 23-25.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: typographical error on page 14, lines 27 and 28: “step 650” should read as “step 660”.

Appropriate correction is required.

Claim Objections

4. Claims 11-12 are objected to because of the following informalities: Claim 11 recites the limitation "the first block" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-10, 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: power level determination/adjustment. Power level determination/adjustment is essential to the disclosed system operation as described in the SUMMARY OF THE INVENTION and flowchart on Fig. 7 as step 615.

Claim 13 limitation "immediately preceding transmission cycle" is unclear, because it is not understood what is included in this cycle and what serves as a time reference for "immediately preceding" portion of the limitation.

Claim 15 limitation of an apparatus that transmits frames "an acknowledgement circuit that generates acknowledgement signals corresponding to the received segments" is not

Art Unit: 2662

understood, because it is the receiver that generates acknowledgement signals corresponding to the received segments, as disclosed on page 12 lines 1-20.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13-18 are rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Kanai (US 5,386,589) in view of Sen (US 6,208,620).

Kanai substantially teaches the limitations of claim 13:

Base station transmitter (base station transmitter 15 on Fig. 1 and 3, wherein system 11 is a telephone cellular network 5:1-25), comprising:

A wireless transmitter (transmitter 21 and amplifier 27 on Fig. 3 and 6:30-37), the transmitter power being controllable to substantially transmit frames (inherently part of the system, because telephone cellular systems utilize frames) according to a set of targeted error rates (error rates thresholds LV1 and LV2 on Fig. 4 and 7:48-8:15); and

A monitor that determines a number of error conditions of previous transmission of frames (bit error detector BER detect 47 on Fig. 3 and 7:7-25);

Wherein the monitor sets the transmitter's power to a first power based on a first targeted error rate of the set of targeted error rates, if at least one error condition occurs in an immediately preceding transmission cycle (increase power as shown in step 104 of Fig.4, when error rate is

Art Unit: 2662

higher than LV2 of step 103 8:5-11), and wherein the monitor sets the transmitter's power at a second level based on a second targeted error rate of the set off the targeted error rates if there is no error condition in the immediately preceding transmission cycle (reduce power as shown in step 102 of Fig. 4, when error rate dropped below LV1 of step 101, including no error condition, 7:50-67).

Kanai does not teach using error conditions based on number of erroneous frames (FER), utilizing acknowledgement signals, TCP protocol and a reformatting circuit to generate the frames based on the received segments.

Sen teaches using error conditions based on number of erroneous frames, FER (errored air-link frames FER 8:45-63) utilizing acknowledgement signals of TCP protocol (utilizing ACKs of TCP packets (3:40-48) and a reformatting circuit to generate the frames based on the received segments (inherently part of WAG 203 and DNG 204 on Fig. 2, because the conversion from the segments of Internet 205 to the frames of wireless connection 202 is essential for the system operation 6:14-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using error conditions based on number of erroneous frames (FER) utilizing acknowledgement signals, TCP protocol and a reformatting circuit to generate the frames based on the received segments of Sen to the system of Kanai to utilize well known criteria for the frame errors and provide interface to widely used network: Internet.

Regarding claim 18, Kanai teaches threshold LV1 is less than threshold LV2 8:4-5.

9. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar (US 2002/0167907 A1).

10. Regarding claim 11, Sarkar substantially teaches the limitations of the claim:

A method for controlling error rates (a method for achieving the required FER in system 30 on Fig. 2 [0063]), comprising:

Transmitting a first block of one or more frames at a first power level to target a first frame error rate (transmitting frame at power level, shown between t3 and t4 on Fig. 5 and [0071-0073] to achieve the target FER); and

Determining whether one or more first error conditions occurred (determining at step 104 of Fig. 7 if an error occurred [0077]); and

If at least one first condition occurred, transmitting a second block of second frames at a second power level to target a second frame error rate (transmitting a second frame at a second power level as shown between t2 and t3 on Fig. 5 and according to the power increase 106 on Fig. 7 and adjusting FER [0073]). Sarkar also teaches retransmitting the errored frames at a specified power level and error rate (using same energy level for transmission and retransmission as shown on Fig. 4 and [0069-0070]).

Sarkar does not teach combining the next frames with the retransmission frames into one block, wherein next frames and retransmitted frames are transmitted at the same power and target the same error rate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add combining the next frames with the retransmission frames into one block, wherein next frames and retransmitted frames are transmitted at the same power and target the same error rate to the system of Sarkar to simplify the system design, by avoiding separate power levels for next frames and retransmitted frames.

Art Unit: 2662

11. Regarding claim 12, Sarkar teaches;

Determining whether one or more second error conditions occurred (determining at step 104 of Fig. 7 if an error occurred [0077] for a third frame);

If at least one second condition occurred, transmitting a third block of third frames at a third power level to target a second frame error rate (transmitting a third frame at a third power level as shown between t1 and t2 on Fig. 5 and according to the power increase 106 on Fig. 7), wherein the third frame contains at least one second frame associated with one or more second error conditions (see claim 11 rejection above), and

If no second condition occurred, transmitting a third block of third frame at the first power level (transmitting a third frame at a first power level as shown between t3 and t4 on Fig. 5 and according to the power decrease 108 on Fig. 7, returning to the previous power level).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'DL' followed by a stylized name.

Dmitry Levitan
Patent Examiner.
09/21/05